

efunda

engineering fundamentals

Aluminum Alloy AA 1100

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AA 1100

Category Aluminum Alloy

Class Wrought

Composition

Element	Weight %
Al	99.00 (min)
Cu	0.12

Mechanical Properties

Properties	Conditions	
	T (°C)	Treatment
Density (×1000 kg/m ³)	2.71	25
Poisson's Ratio	0.33	25
Elastic Modulus (GPa)	70-80	25
Tensile Strength (Mpa)	110	
Yield Strength (Mpa)	105	25 H12 more
Elongation (%)	12	
Reduction in Area (%)		
Hardness (HB500)	28	25 H12 more
Shear Strength (MPa)	69	25 H12 more
Fatigue Strength (MPa)	41	25 H12 more

Thermal Properties

Properties	Conditions	
	T (°C)	Treatment

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Thermal Expansion ($10^{-6}/^{\circ}\text{C}$)	23.6	20-100	
Thermal Conductivity (W/m-K)	218	25	H18 more

Electric Properties

Properties	Conditions		
	T ($^{\circ}\text{C}$)	Treatment	
Electric Resistivity (10^{-9}W-m)	30	25	H18 more

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